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# INAUGURAL ADDRESS

DELIVERED BEFORE THE

NEW YORK ACADEMY OF MEDICINE

BY

A. JACOBI, M.D.

PRESIDENT OF THE ACADEMY



*Reprinted from THE MEDICAL RECORD, February 14, 1885*

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IT has been my privilege to enjoy many professional honors. Whatever favors my colleagues of both city and State could ever dispose of, they have liberally conferred on me at different times. To-night I am called upon to acknowledge my indebtedness and express my thanks to you for an extraordinary proof of your consideration and confidence. I do so from the depths of my heart, my pride in my elevation to the presidency of the New York Academy of Medicine being checked only by the overwhelming sense of the grave responsibility incurred.

In regard to the two highest positions the profession of the city has ever placed me in, I have been both fortunate and embarrassed. For when, some fifteen years ago, I took the chair in the Medical Society of the County of New York, my predecessors were Edmund R. Peaslee and George T. Elliott. The former was erudite, wise, a celebrated specialist, a renowned writer of great weight and force. The latter was bright, quick, versatile, as eloquent as his predecessor, conversant with the literature of his profession, also a good writer, and universally admired and loved

for his pleasing manner and thoroughly gracious bearing. The difficulty of presiding after such men was relieved by but one all-important circumstance, which was this, that they had raised the Society to a flourishing condition such as had never existed before.

Now, as concerns the presidency in this Academy of Medicine, I believe I am in nearly the same position. If I were more eloquent I should try to do justice to the president of so many years, in recalling his services in the interest of the literature of medicine, of the standing of the profession at large, and of the development of this Academy. To say that the medical world knows him well, that we, the profession of the city, and the members of the Academy, are under great and respectful obligation to him for his untiring care and energy, his enduring patience, his kindness and urbanity, and his uniform success in conducting the affairs of the Academy, is but an incompetent expression of my feelings. Personally, I add my extreme gratification at the fact that it was under his guidance and supervision that the Academy could overcome such dangers and strifes as I hope these walls will never behold again. As they, however, are things of the past, I hope I shall have nothing to do but to preside over harmonious scientific meetings only, such as were contemplated when the Academy was founded. It will be my ambition and pride to contribute to its success as much as I can, hoping, at the same time, that your expectations will not be measured by Dr. Barker's eulogistic remarks, which I should be glad to deserve. In regard to them I will only say that I believe they were made on the principle and for the reason, that it is wise to stimulate ambition into powerful efforts for the accomplishment of ends by praising beforehand. The members present I beg again to receive my thanks, my promises, and my request that every one may consider the interests of this Academy under his personal charge. It will then be an easy task not only to preserve its high character, but in the course of time make

it the largest and most influential scientific institution in the country.

How this can be accomplished has engaged my thoughts more than once. For the New York Academy of Medicine has been established for more than one purpose :

*First.*—The cultivation of the science of medicine.

*Second.*—The advancement of the character and honor of the profession.

*Third.*—The elevation of the standard of medical education.

*Fourth.*—The promotion of public health.

It has not been founded upon the plans of European institutions bearing similar names. The academies of sciences or of medicine in Europe, established for the promotion of the science and art of medicine, are institutions with a limited number of members, who have peculiar claims for such distinction. In them we find the most representative men only. Every one is a specialist in his way, a teacher, a savant ; most of them are men of reputations, many are celebrities. They are professors in universities, directors of clinical institutes, independent of pecuniary compulsion to practise medicine, enjoying the leisure required for studies of their own. They are governed in part by rules prescribed by the government, which pays for their services either rendered to a public institution, or to pure science.

Our Academy is a democratic institution. It is not limited in numbers—on the contrary it is desirable that the many respectable physicians should gather round its flag. Like our political community, it looks for its development and success in the co-operation of the competent and cultured masses. Like the Union, it is a voluntary confederation of peers who make their own laws, and obey them because they are of their own making. The members have the same interests, both scientific and professional. There are but very few of us who are not engaged in the practice of medicine. When the Academy

was founded, the members were, all of them, general practitioners ; specialists there were but few. This has changed much, both study and practice have tried to become more profound by circumscribing and limiting their aims. But all of us are active men, not tied down or given up to study only. Thus we perform less laboratory work than they do in Europe, and write fewer monographs on special subjects. But the number of facts closely observed at the sick-bed or in the examining-room has increased from year to year. In spite of the circumstance that we are all busy men, the literature of medicine in New York and the United States is no longer mostly parasitical, as Oliver Wendell Holmes was justified in complaining during the session of the second meeting of the American Medical Association. Original work has taken the place, in part, of translations and reprints; still all the time the connection between the medical men and the public, the doctor and the patient, has not been severed. This is the peculiar feature of American, as it is of British, medicine. Anglo-Saxon medicine has never forgotten that the aim and end of all medical science is the treatment and healing of the sick, and that every special study is but a means to obtain that end.

Thus our Academy is not to be the centre of a select few, who speak to the rest of mankind through their writings only, but of all who love their science and live the lives of respectable practitioners. All ought to be members. I have often been told, however, that the large number of societies prevents men from becoming members in the old and large ones. That is so. There is too much division and subdivision. But that is not the fault of the Academy. Under other circumstances the Obstetrical Society might well have been a section of the Academy ; the laryngologists, otologists, ophthalmologists, dermatologists, might have their own sections under the auspices of the Academy, though under their own rules, their own officers, and, while doing the same amount of

good work, not lose their connection with the main body. The large societies, such as the Academy, or the American Medical Association, or the German Association of Physicians and Naturalists, lose by the secession of important branches and their representatives. The unity of medicine is lost sight of, and the interests of science and the profession are suffering. Instead of one or two, every section of this Academy ought to be flourishing. Let us hope they will. We have been told to-night that there was more than an abundance of papers offered. Our rooms they are welcome to. Though we have to think of some time increasing our facilities, we can still accommodate them, and others besides. Indeed, most of the medical societies of the city would do well to avail themselves of the home the medical profession of the city have found in this hall, and meet here.

The peculiar features of this Academy I have mentioned permit of varied results. The mixture of the best brains of the profession and the modest practitioner is capable of raising the standard of the average professional man far beyond the level of the European medical man, frequently in knowledge, always in industry and ambition and ethics, without interfering with the individual and original labor of the hardest workers and best thinkers. Have we been successful on this side of the Atlantic?

They say we have no John Hunter. All Great Britain, in all its pride, has but one. No Bichat or Laennec. All the glory and elegance of France have but one. No Virchow. All the centuries of toiling and philosophical Germany have produced but one. What we do have, however, is a medical profession with unbiassed minds, clear insight, critical eyes, undaunted industry, and that republican courtesy which recognizes—*suum cuique*—the peculiar advantages and services everywhere, and the democratic tendency of appreciating, and appropriating, the intellectual accomplishments of the globe, and of utilizing them for the practical necessities of the commonwealth.

Besides, we do not live in the back woods, or in the darkness. As long as the Confederation and the Union have been in existence, their medical men have been, to say the least, marching in line. In what the Anglo-Saxons have known and taught, they have both participated and co-operated. Without the counting in of the original American contributions to science, the history of modern medicine would be incomplete indeed. Let Europe boast of their great names: this young community has the heirloom of the great names of Bard, Rush, McDowell, Drake, Beck, and many others of *past* years. Let the history of this Academy be written—and a grateful and gratifying labor it would be—and the array of great names is such as to astonish many of the young men in this room, who unconsciously and unconcernedly toil over the graves on which are inscribed the names of men great in literature, or achievements, or influence, great in mind and character. Let me mention a few of those who have passed away. I have known personally, and conversed and discussed with, John O. Batchelder, George M. Beard, Gunning S. Bedford, Ch. A. Budd, Gurdon Buck, H. D. Bulkley, William H. Van Buren, Freeman J. Bumstead, Henry G. Cox, George T. Elliott, John W. Francis, Edward Delafield, Elisha Harris, Horace Green, Ernst Krackowizer, Valentine Mott, Josiah Clark Nott, Edmund R. Peaslee, Willard Parker, J. Marion Sims, Joseph M. Smith, Alexander H. Stephens, James Stewart, John Watson, Robert Watts, Isaac Wood, James R. Wood. Many of these names are known wherever medicine is taught and practised; some of them will never die. This Academy will always cherish the names of its members who contributed to the glory of universal medicine and the American country.

When I, and those as old as I, knew these men, most of them were in advanced years. At that time the proportion of white heads was very much larger than it is to-day. I venture to say that it was for the good of the Academy that that was so. Neither the ~~political~~ republic

nor that of science can thrive without the co-operation of all. At that time the number of older and old men was such as to draw forth sometimes the remark of some class of young men that the Academy was the headquarters of old fogies, and for that reason might be avoided and shunned. Much has been changed in this respect. Curly heads and young faces are plentiful, a good sign indeed for the energy and activeness of the growing generation. Many white beards, however, and bald heads have commenced to stay away for years, a proof indeed of the increased claim on their time and strength, but we fear also, now and then, of listlessness and indifference.

This ought not to be so. Neither in politics nor in science does age extinguish citizenship, with its rights and duties. Besides, I know that the best trained young minds are modest enough to admit that they are able and anxious to learn from those whose opportunities extend over a long number of years, and that books, brains, and experience are a greater power than books, brains, and inexperience.

These remarks I make for the purpose of requesting the older members of the profession not to withhold their presence and aid. Among them are men widely known in both hemispheres. When they write everyone reads, both here and in Europe. Let them not forget that a vast audience is just as anxious to hang on their lips when they either lecture before us, or take part in a discussion. They owe their teaching and their example to the rising generation of our younger brethren. They will teach them both medicine and modesty. May nobody who neglects his own duty toward them and the profession at large accuse a young man of forwardness. Some of them have indeed reaped a good harvest from living up to their duties as citizens of our republic of science. For if there be a fountain of youth for old men, it is the constant mixing and working with the young. The Nestor of our surgeons, whose face we greet with joy in almost every meeting, <sup>and</sup> whose voice we are delighted in hear-

ing in our discussions, proves better than any preaching the powerlessness of so-called old age.

The hosts of others, general practitioners and surgeons and specialists, whom we like to boast of and to honor, will always be welcomed by all of us, both old and young, to seats in the front ranks. If they will consent, not only our scientific but also our public aims will be more apt to be reached.

For our position is that of the natural advisers in all matters concerning sanitation and health. The larger the number of our members, the more we represent the best minds and all ages in the profession, the more readily the public and its legislators will listen to us. When they know that our advice will be the digest of the best knowledge and the ripe wisdom of the profession, they will not wait until it is forced upon them. In matters of health the two large medical societies of the city ought to be, will be, the authorities. If that be so, it will no longer depend upon a number of ladies only to remove intolerable nuisances from the heart of the city. The simple appeal of the profession will become the protection of the public. The latter will soon learn that it can rely on your knowledge and public spirit, and as it calls on the bar for legal advice, it will consult the medical profession for sanitary necessities. In this way it will happen that some time the President of the Board of Health will be nominated, or appointed by the profession ; that no Board of Education, no Board of Charities will be complete without a prominent medical member ; medical bills will pass the Legislature, when backed by the whole power of the profession, without either delay or mutilation ; the supervising officers of factories, nurseries, streets, baths, gas-houses, will be physicians ; aye, the most improbable thing will happen, which is this : that the public will acknowledge that the government of hospitals ought not to be without medical advisers in their boards. In order, however, to accomplish such results, we must unite our numbers, powers, and influence. The

public and legislatures will respect and obey the regular medical profession more eagerly than the advice of individuals or societies. It gives me great pleasure, in this connection, to be able to announce to you that the representatives of the profession of the State agreed but yesterday on a bill to be presented to the Legislature, ordering a Board of State Examiners destined to license the practice of medicine. The unanimity of action in this respect on the part of apparently diverging and conflicting interests is a good omen, in this progressive State, for the growing influence of the medical profession. Thus far the State Medical Society has done its part of the work nobly; now, may everybody see to it that the Legislature of the State be kept well informed and well advised.

The practical tendency of this Academy corresponds with the peculiar practical nature of the development of medicine in the English-speaking nations from the last century onward. Even the most fragmentary study of that development is of great interest indeed. Altogether, medicine in the eighteenth century exhibits a peculiar character. It is true that knowledge was not widespread, but the heads of the profession were capable, painstaking, searching, cool-headed men, good observers, and excellent describers. There was a large number of good monographs, excellent histories of cases, and fair diagnoses of the general condition of the patient. Local diagnosis, it is true, was mostly out of the question, since no sooner than in the second half of that century Morgagni collected in his illustrious work, "De Causis et Sedibus Morborum," all of the only three thousand post-mortem examinations which had ever been recorded in all ages and countries. Their judgment was sound, their therapeutics—though often exuberant—safe. As the scientific language of most of them was the same, Latin, their spirit was not local nor national. The same class of men were found in Germany and the British possessions; also in Holland and France. In the former we meet the names

of Werlhoff, R. A. Vogel, Zimmermann, Lentin, Van Swieten, J. P. Frank. There was also Auenbrugger, who ought not to have been so readily forgotten. In Great Britain there were Mead, Huxham, Fothergill, Pringle, Heberden, Monroe, Home, Cullen, there was that giant John Hunter. In America we had Bard and Rush. In France, Levret. In Holland, at an early date, Boerhaave. The only fanatical theorist of all the English writers was John Brown; the only obscurist, who ought to have had a place in Germany between 1800 and 1840, was Robert Jones, with his "Inquiry into the State of Medicine on the Principles of Inductive Philosophy" (1782). When Broussais reigned supreme in France, his doctrines were welcomed by a great many in England. But the Anglo-Saxon mind is not easily drawn away by theories, and there is after all more solid work in Broussais than wanton theory only. Thus the English literature of the early part of this century teems with good observations and monographs by many more than those I here mention—Travers, Williams, Crawford, Astley Cooper, Brodie, Bell, Abercrombie, Cheyne, Pitcairn, Bright, Hope, and Carswell.

Of French names I have mentioned but one.

The redemption of France, after a century of almost unparalleled corruption and misery, begins with its great Revolution. Never before did fate grant to an unhappy nation a larger number of great spirits, both in politics and science. The faint impression the freer institutions of the British Island made on French literature would not have influenced the development of the country for centuries to the same extent as did the necessities of the population. In the history of political and mental development changes more or less sudden or gradual appear to be the rule; rise and decline change off, as the fertility and sterility of a corn-field. The fertility of France lasted a long time. While the greatest man in its political world could not do better than spread all over Europe part of the results of the French Revolution

through violence and murder, a young scientist revolutionized medical science by genius and hard work. That is what Bichat did when he studied the physiology and pathology of the organic tissues. Since that period, France has marched at the head of medical science for about half a century. Pinel, Corvisart, Cruveilhier, Biett, Cazenave, Gibert, Laennec, Ricord, Civiale, Guérin, Guislain, Baillarger, Leuret, Longet, Guersant, Taupin, Valleix, Legendre, Dupuytren, Rousseau, Rilliet, Barthez, Durant-Fardel, Orfila, Louis, Broussais, Piorry, what a host of illustrious names, and by far not the only ones who will recall the glory of the French nation when there will be no longer a political France. It is true that a decline has set in. The number of really great men in modern French medicine is but limited. Charcot's name overshadows the reputations of all others, and it appears to me will live for centuries. May be also that Pasteur will be recognized as a fixed star in the scientific sky if he will succeed in divesting himself of the doubtful attributes of polemical tendencies.

After Bichat there are three French names connected with the history of medical sciences in all countries. Laennec's revolution of diagnosis by percussion and auscultation, is not any the less important and precious because Auenbrugger had worked in the same field more than half a century previously, for no other purpose but complete oblivion. Magendie's experimental physiology and pharmacology has benefited all mankind. His is the introduction of alkaloids, such as quinine, veratrine, strychnine, piperine, morphine, emetine—his the successful admission of bromine and iodine into practical therapeutics. Finally Broussais, by overthrowing ontologies—though he created one of his own—by localizing disease, by urging prevention and abortive treatment, by studying the anatomical lesions of pathological processes, has substituted a method of anatomical thought in diagnosis for the merely clinical and empirical observation of the sick, and thus been the intellectual author of that method of

medical knowledge and reasoning which is best known by the name of the Vienna school. I shall have to consider its representatives shortly, with all its virtues and faults, both of which were learned and loaned from the illustrious Frenchman. For not only did he convey to them his anatomical way of thinking, but he also taught them to be satisfied with coarse local anatomical lesions, and with a nominal diagnosis, adding the assurance that those lesions must lead to death ; that indeed the case is either getting well spontaneously, or is absolutely hopeless, and that a treatment of any kind is powerless.

The parallelism of political and scientific conditions which strikes us so admirably in the history of French development after the impulse given by the Revolution, is sadly illustrated by poor Germany. The country poor and forlorn, divided in hundreds of shreds, large and small, tyrannized and robbed by hundreds of dukes and bishops, and princelings of all sorts, every one the inferior in mind, but the emulating admirer of the tendencies of that despotic Frederick the Second of Prussia, in whom it requires the equally despotic soul of a Carlyle to find nothing but admirable traits ; that country had, about the end of the eighteenth century, one representative in medicine corresponding with the character of the time. Hufeland was a fair observer, a copious writer, an influential man, but weak and accessible to everybody and everything. It was he who admitted the first Hahnemannian gospels to his journal, and who was of the wise opinion that there may be something good in everything. Then came the French, and whipped the Germans out of political existence. Then the wars which expelled the French, bloody, costly, and short, aroused a peculiar romantic fanaticism which pervaded the whole literature of a short decade, and could but have an unfavorable influence on science. Then came decennia of brutal political reaction and suppression, the scanty means of the nation being spent on police, military, and dungeons, in which the flower of the country, and particularly of the uni-

versities, was incarcerated. During that time German thought had no place in terrestrial parts ; even before that time Schiller had proclaimed man "free though he wore chains." This sort of freedom the Germans utilized to become transcendentalists. The principal method of studying nature was imagination. Even Kant, the mathematical thinker, had taught them the art of construing things *à priori*. Then came Schelling with his system of natural philosophy, and Hegel, who wrote twenty big volumes, and is reported to have said on his death-bed, that in all his life he had but one pupil who understood him, and that one did not know anything about him. Under the influence of these philosophical absurdities no medical science could thrive. That was the time of animal magnetism and granioscopical humbug.

In such a condition of universal intellectual semi-paralysis and revelry in big words and clouded sensations of all kinds, combined with the insensate and murderous character of therapeutics, it was natural that homœopathy could thrive, with its axioms, that disease was an enemy from without, the result of psora or of medicines ; that nature was an enemy of man, that nature will not cure a disease but a medicine will ; that no medicine will cure which can be shown by any physical or chemical analysis to still exist ; that its dynamical power increases with its attenuation and annihilation. That was the time in which one of the great lights of German medicine defined inflammation as the condition in which the "electrical essence (or part) is affected in the dimensions." Marcus never said that he understood that himself. At that time the medical literature of Germany was full of such philosophizing nonsense ; full of contempt of the unphilosophical foreign countries ; of Bright, with his British coarseness in studying nature as it was ; of Laennec, whose percussion and auscultation were declared to be immoral and irreligious. My beloved teacher, Professor Fred Nasse, though all his life a believer in and author on animal magnetism, was one of the first to utilize Laen-

nec's great innovation and the lessons of foreign teaching. Even Schoenlein, though it was he through whose influence young Virchow, after he had been expelled from Berlin for his liberal political views, was called to Würzburg to teach pathological anatomy, could not free himself from the influence of philosophical doctrines. At that time the science of therapeutics consisted indeed in nothing but empty words, its practice in a great part to the traditional blood-letting, salivation, and purging. Thus it was that the fanatical hydropathists, and the adversaries of vaccination could obtain such rare opportunities and successes; thus that, but forty years ago, Rademacher could divide all ailments into saltpetre, copper, and iron diseases, by reason of the remedies of which each cured one-third of all the ailments of German kind.

Schoenlein and Liebig having prepared the medical minds, and the influence of foreign literatures being gradually felt in Germany and Austria, it so happened that Vienna had in its faculty of medicine quite an array of medical genius. Rokitansky, Skoda, Hebra, have long reigned supreme. Broussais' doctrines, good and bad, were readily accepted; his ontological gastro-enteritis was replaced by Rokitansky's doctrine of the crises of the blood, thus re-establishing the old humoral theory on an apparently firmer foundation. In Rokitansky's opinion the anatomical changes were the only thing in medicine worth knowing. Skoda, for some time, experimented carelessly and unsuccessfully with remedies; his ill-success and Rokitansky's teaching confirmed the nihilism of Broussais, against which Laennec protested in France, and made the expectative treatment and the nihilistic faith the gospel of German practice.

" This was the medicine—the patients' woes soon ended,  
And none demanded: Who got well?  
Thus we, our hellish boluses compounding,  
Among these vales and hills surrounding,  
Worse than the pestilence have passed.  
Thousands were done to death from poison of my giving;  
And I must hear by all the living  
The shameless murderers praised at last." {<<1>}

But in Goethe's "Faust" this is said by an incorrigible philosophical roué, who is ready to give himself up to the devil, and in Germany it had the result that the public, who have a right to desire to be cured when they fall sick, preferred the homœopathic pill-box to the pathologist's post-mortem case.

Not long after, Oppolzer, whose name ought to be blessed forever in Prague, Leipzig, and Vienna, began his influential career. In him Germany possessed its first great physician in this century, who knew pathological anatomy perfectly, was a thorough diagnostician, a humane physician and amiable teacher, who recognized the social, scientific, and humane duties of the practitioner, abhorred preconceived ideas and *a priori* constructions, acknowledged principles and facts only, and no duty but to find the truth.

It was about that time that Rudolf Virchow commenced to revolutionize medicine. Modern medical science owes its solid foundation and elaboration to him and his followers. The book of medicine of to-day, and, I trust, of the future, bears the imprint of his genius on every page. We all have read, and admired, and praised, knowing that when we readily place Germany in the first rank of the medical world to-day, the name of Virchow is in every mind, on every lip. This brief sketch cannot do him justice, nor do I desire to elaborate a theme with which every one is familiar. But one remark I cannot suppress, viz.: that he is not only great in his revolutionary discoveries and innovations, but in his self-denying conservatism also. If the bacteriomania of modern time has not been accepted uniformly as the universal gospel of modern pathology, if thoughtful hesitation and healthy criticism is still heard above the noisy waves of the seas of all-explaining and all-saving theories which claim to have given, at last, an absolutely solid base to etiology and pathology, that merit again belongs to a great extent to Virchow. I speak of it here because I hope that this Academy may be able to contribute to the solution

of questions of great import, by original studies and discoveries.

For there was lately a time, or rather we still live in that time, when a single series of discoveries lays claim to having changed the aspect of pathology at one stroke, and solved all problems. You know I speak of bacteriology. In America also, all of those who cannot judge of the question by their own investigations, that is, the practitioners, either general or special, have readily accepted the new gospel with but few exceptions. The new theories that infectious and zymotic diseases have each their own bacillus, are so pleasant and promised to be so fruitful that it required some courage to critically resist the flood. On the other hand, those amongst us who have a right by their own researches and special knowledge to be heard, have hesitated to accept the results of microscopical, actual or alleged, discoveries as the sole explanation of everything infectious and zymotic. Amongst them I shall only name Wood and Formad, and Sternberg. Into the merits of the case, and the weighing of reasons I cannot go this evening, but it has appeared to me that it would be well to direct the attention of the Academy to that subject as one greatly deserving of its attention.

To me, while I readily acknowledge a valuable increase of pathological knowledge, and the fact that the spreading of some diseases at least, slow, and gradual, and regular, seems to prove the multiplication of cases of disease by the regular multiplying of its causes, it has always appeared that purely bacteric etiology has too often begged the question, and that the answer to the question, whether organic or chemical poisons are the main causes of infectious diseases, has, by no means, been satisfactorily given. In the course of the last dozen years organic chemistry has made as rapid strides as has microscopy. Cadaveric poisons, ptomaines, have been discovered in great numbers. Most of them are very destructive. Sudden deaths from zymotic and infectious diseases resemble much those

roduced by these poisons. That the stings of insects or the poison engendered in putrid corpses lead to speedy destruction has always been known. The symptoms are exactly like those produced by many known poisons. Forensic medicine has a great many instances already in which it could be proven that the poison extracted from the body of the dead was not a vegetable agent, introduced during life, but the cadaveric poison. Count Gibbone was said to have been murdered with delphinine. Professor Selmi proved that what was claimed to be that vegetable poison was cadaveric. In another case he saved the life of a suspected person by proving that it was not morphine, but a ptomaine which was found in the body. Besides the poisons named there is strychnine, colchicine, atropine, coniine, woorara, nicotine, veratrine, hyoscyamine, narceline, the symptoms and chemical reaction of which are the same, or almost so, as the cadaveric poisons. Lecithine is found in putrid fish; a very dangerous chemical poison has been extracted from putrefying Indian corn and rye. Thus it is that many cases of poisoning with cheese, meat, fish, sausage, jelly, and yeast, many of them resembling acute infectious fevers, may find, and indeed have found, their ready explanation.

Brieger found quite a number of different varieties of cadaveric poisons—neuridine, neurine, muscarine, aethylendiamine, gadinine, and others. Many of these destroy life in a short time, and with the symptoms of acute infectious diseases. These poisons are found, in many instances, in the fresh dead body, not in that one which has undergone complete putrefaction. The results of putrefaction will, after a while, change entirely and become rather wholesome than injurious. Many years ago, Salkowski examined a vessel full of ascitic fluid, which he knew to be in utter putrefaction when he last inspected it. Not only was there no putrefaction any more, but, on the contrary, chemical decomposition had formed phenol. Thus putrefaction had worked its own destruction and antidote. The inference, then, is that a poison, even

in the course of the same disease, may not always be found.<sup>1</sup>

Ptomaines are often met with in the presence of bacteria. Is it the latter which produce them? Do they so decompose the albumen of the tissue that a ptomaine must or can develop? Or is it their own vital change which produces it? Most modern writers—not chemists—believe it. But if the cause of decomposition of the living or dead be not bacteria, but a chemical poison after all, is it necessary to assume that the poison cannot form except through and with the presence of bacteria? And is the bacterium the only poison? or the only source of the poison?

If deadly poison, such as we know to destroy life suddenly, or almost suddenly, and of such virulence as is reported in what was formerly believed to be legendary only, but which may be historical, will almost invariably originate in the dead body, is it so impossible that it may develop in the still living under certain circumstances? Have we not had enough yet of the monthly instalments of new bacilli which are the invariably correct and positive sources of a disease, and replaced by the next man who comes along? Have we not yet enough of the statements, that, as for instance several bacilli are claimed each to be the only cause of diphtheria, by several observers, that there may be several distinct bacilli everyone of which can produce the same scourge? Is it not just as safe to still presume, that, when several forms of bacilli are believed to be such sole causes, that the real cause is in neither?

<sup>1</sup> Would it be so impossible to judge that the bacterium is an accompaniment of a chemical poison and may be present, or absent, according to the changed condition of the poison? Such changes take place all the time in putrefying material as Salkowski has shown, and others after him. They probably take place in the living body also, during infectious fevers. In the incubation they develop, they are most poisonous and vehement during the height of the process, they gradually change into less dangerous combinations, into an indifferent state, and finally a really disinfectant material. Thus it may be that the floating poison may become even beneficial. Is it for that reason that patients who have survived a serious attack of typhoid fever, are endowed with better nutrition and more vigor afterward than they ever enjoyed before?

Exactly so, neither in one nor in the other, notwithstanding it all appeared settled. For our journals are replete with the very latest authentic bacterium of diphtheria. This time it is neither Klebs nor Eberth, but Loeffler. Reports, discussions, and even editorials carry his name over the world. The very nature of diphtheria is said to be revealed again, as several times before ; still, the discoverer admits that there are cases without the bacterium.

The matter is becoming ludicrous. I begin to fear something like the recent rebellion against piano-playing in a large European city. Is not music a godly art, and the piano a blessing to the musician ? But the playing of fifty thousand beginners in a large city is a nuisance. When bacterio-microscopy in the hands of beginners becomes noisy like piano-playing—noisy in books, pamphlets, and journals—a gentle protest is permissible. That protest is not meant for the masters who know how to wait and to mature. I do not speak against Robert Koch and his peers, who all of them are more modest than their followers. When the kings build, the cartmen are kept busy—and boisterous.

A dozen years ago the coccus of whooping-cough was said to be discovered. There was no doubt about it. There was whooping-cough, there was a coccus, what was plainer and more conclusive ? To cure whooping-cough, nothing is required but to kill the coccus. Quinine will kill a coccus, quinine cures whooping-cough. Since that time there is no more whooping-cough in existence ; or, if a case would be malevolent enough to turn up, it could not last longer than until a few whiffs of quinine can reach it. That is ludicrous, is it not ? But it was preached like gospel, and it was believed. Many more such have turned up, and will turn up, for coming years to smile at.

There is a peculiar feature in this bacteriomania. Its principal impetus it received in Germany at a time when great changes had taken place in its political and financial affairs. All at once there was an Empire, of which

historians so much spoke, youth so much dreamed, romancers so much fabulated. All at once, at the same time and a decade before, an unusual industriousness, commerce, enterprise, and unwonted wealth, and still more expectations than wealth; all at once an influx of five thousand millions of francs, not earned by honest work, but conquered by war, which could not but turn the poor heads and unstable the solid foundations of regular development. From that time dates that lack of safety and steadiness in German financial circles. They have even invented a name for that period of swindling, "*gründerthum.*" Speculation was rife—fortunes were made in a day from nothing but self-assertion and daring and lost as quickly.

The moral and intellectual atmosphere created by these tendencies is never breathed by one class of people only. If self-assertion can make a fortune in finance, why not in science? If a reputation may perhaps be made by a stroke of chance, why not try that chance? Speculation was rife. Any young man can look through a microscope, perhaps he will draw the prize in the lottery of alleged science. Looking would be all right, if he would not write. Medical life would be easier if there were less journal articles containing the latest infallible discoveries. Thus it has come to pass that German medicine has a two-fold aspect nowadays. The days of her superiority are not over yet, her greatest men still live, and the toiling thinkers are at work, but the number of speculators is immense. A great many of the articles printed in the journals of the last ten years have been prematurely published, the number of preliminary notices announcing discoveries under way is very large. The great embryo cannot wait. He is afraid of having his celebrity snatched away from him by the next door microscopist.

Thus it is that we often find a difficulty in keeping our eye on the great lights, whose rays are always welcome. If learned and thoughtful specialism has its justification anywhere, its field is the solution of the mooted ques-

tions alluded to. Thus far I claim, however, that in regard to bacteriology, the main questions are before the medical world still. I firmly hope the Academy will prove the centre of critical researches by which the problem, whether bacteric or chemical poison, still a mystery, will be carried nearer its solution.

In this expectation I am justified by a reference to the historical fragments you permitted me to sketch to-night. There has been no deviation from the empirical and clinical tendency of Anglo-Saxon medicine from the beginning. It was so strong that it gave character to the medicine of the eighteenth century. In the words of the Testament I might say, Sydenham begot Boerhaave, Boerhaave begot van Swieten, van Swieten begot John Peter Frank. Sydenham and his generation of followers are the flower of the whole century and their spirit penetrates everywhere. In those times the senses alone were the diagnostic apparatus. The exact methods of the following decades have sharpened the senses of the English and American medical men, and rendered their observations more accurate and their results more correct. Live and learn, has been their pass-word. No new methods have ever been neglected, only unfounded theories ought not to find root in the regular medical profession. As the best features of all experience and wisdom of all ages and all nations have been utilized in the establishment of our political system, thus the American medical mind has received, appropriated, and critically digested the results of foreign scientific labor and added of its own. It is with sincere pleasure that I have again read that interesting collective volume containing a century of American medical history. In it those of you who have not read it will find many a good reason to be proud of the achievements of our country. It is so modest in its tone and contents that many more names might have appeared in the enumeration of men and labors, not to speak of those who have added materially to our wealth of intellectual productions since. Its perusal will be a revelation to many who are in the habit of looking for everything new

and trustworthy, and—that is the technical term now-a-days—epoch-making, from abroad. If there is anything which teaches us both justifiable pride and desirable modesty, it is the history of our science in our whole country. For besides a great many of the former and present members of this Academy who have accomplished lasting results, there are a great many other Americans in other states and cities who stand on a level with the best of all nations.

From the reading of old journals I learned but lately that four years before Semmelweiss proclaimed the contagious character of puerperal fever, against the protest of the official standard-bearers of obstetrics in Austria and Germany, our own anatomist, our philosopher, our poet, our autocrat, our own Oliver Wendell Holmes, taught, it is true, against the ridiculing sneers of Hodge and Meigs, the frequent transmission of puerperal fever by physicians and nurses. I might go on a long time, but I do not stand here to extol America or American medicine. Still I feel strongly that we may be well satisfied with what we, not protected by governmental interference, unaided by a slow growth through centuries, have accomplished in a proportionally short time. The last few decennia gave us the library of the Surgeon-General's office, the "Subject Catalogue," "The Medical and Surgical History of the War," standard books, recognized as such in Europe, great journals, and a goodly array of valuable monographs, and vastly improved college education; they have raised great surgeons and clinicians of universal reputation, and a progressive profession whose aim and best efforts are directed toward the improvement of medical training, and the sanitary condition of the people.

All this I firmly believe is true. If it were not, let us make it so. If it be, let us still rise and work, and with all that, let every man among us feel what Holmes said forty years ago: "I am too much in earnest for either humility or vanity."



